Exemplary Chinese University Professors: Qualities and Impact on Students

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Abstract

This study focuses on the qualities of Chinese university professors as perceived by their students and the effects of those qualities on student learning and motivation. Specifically, what qualities and personal characteristics do Chinese university students attribute to their favorite and least favorite professors, and how do those qualities and characteristics affect Chinese university students? Out of 280 students surveyed from three different universities, 226 surveys were completed, returned and included in the final analysis (response rate of 80.7%). The research found that Chinese students favored professors who are entertaining, who help them learn more and who provide them with helpful feedback on their assignments. Students disfavor professors who are boring, arrogant and do not provide helpful feedback or help them learn more. Linear regressions revealed a connection between high quality professors and student learning and motivation. Along with other studies, this research provides evidence that effective university professors are those who not only possess expertise in their fields, but in addition are engaging, student-focused and able to build rapport with their students.

Keywords: teacher quality; teacher evaluation; characteristics of teachers; model teachers; teacher impact; teacher-student relationship; student motivation; student-centered education; affect in education

Introduction

Stemming from a Confucian worldview, teachers have historically been honored and revered in Chinese society. Over the past 2,500 years, generations of students have dedicated themselves to arduous study in order to meet the rigorous requirements of China's civil examination systems (Hayhoe, 1984). The Confucian worldview places importance on a hierarchical form of obedience in which students are submissive to teachers as children would be submissive to parents. It also places morality and memorization as the cornerstones of learning. In the past, students who were able to memorize the classics and carry themselves with a high standard of moral uprightness were granted high places in government offices (Lee, 1985). Beginning in the mid-19th century, China was exposed to outside influence and internal reorganization (the end of several millenia of dynastic rule) resulting in tumultuous changes that left no sector unscathed, including the education system. The invasion of foreign powers, the tenuous Republican experiment, and the subsequent Communist liberation led to diverse and numerous reforms in Chinese education that have impacted how students in China learn today.

In contemporary China, the past few decades have ushered in even greater liberalization and experimentation in Chinese education. Deng Xiaoping's initiated the Reform Era in 1979, characterized by modernization, globalization and economic reform. Education in the Reform Era has experienced many changes in its own lifespan, but has generally been known for its emphasis on competition (Parker & Parker, 1986). Nonetheless, these changes are not without precedence as seen in the increase in household spending on education with the sole focus of preparation for the *Gaokao*, the standardized test – much like the civil examinations in the past – taken at the end of a student's high school career. The exam determines the higher education prospects for and potential future earnings of each student. Competition is also seen in the opening up of the private education sector with a plethora of private schools and test preparation centers expanding throughout China. Some of these Chinese education companies such as Xueda Education Group and New Oriental Education & Technology Group have record-breaking IPOs on the US stock exchange.

Teachers in China have traditionally been trained and expected to teach to the test; to help students memorize the information that is needed to do well on what will be the most important test of their lives. Recently however, research has indicated that rote memorization and standardized testing may not be the all-encompassing indicator of a productive or successful individual (Zhao & Ting, 2013). Although Chinese students rank high in standardized test scores when compared to the rest of the world (Al Jazeera, 2013), their perceived ability to innovate and think creatively is lacking. This is seen in China's Ministry of Education's desire to improve critical thinking skills (Ministry of Education, 2001). The traditional Chinese "virtuoso" teacher (Paine, 1990), a teacher with a vast knowledge base who teaches students to recite what he knows, is becoming less relevant in an increasingly globalized China.

As education in China changes, so does the concept of good teaching. Tam, Heng and Jiang (2009) noted that Chinese official policy have pushed toward a *jiaoren* (to teach the people) view of teaching and away from a *jiaoshu* (to teach books) view. Although some teachers and professors still hold to a more traditional view of what good teaching ought to be (Walsh & Maffei, 1994), there is a notable move towards student-centered teaching. Countries that have embraced a more student-centered methodology of teaching correlate with higher levels of critical thinking skills developed in their students (Socha & Sigler, 2012), where teachers focus on intrinsic motivation, learning for understanding, and open-ended instruction.

Primary Research Question

The purpose of this study is to examine university student perceptions of teacher quality in contemporary China. What are Chinese university students' perceptions of their professors' characteristics? How do they believe their professors affect student outcomes? In this study, teacher quality is defined as the teacher's "personality traits that help to build strong rapport with students and knowledge and skills about subject content, curriculum, and instruction" (Tam, Heng, & Jiang, 2009, p. 151). Specifically, the study aims to learn what characteristics university students attribute to exemplary and non-exemplary professors and how this might affect their academic performance.

Other Research Questions to Consider

The study also aims to know the reasons behind student preferences and whether specific professor characteristics influence the academic performance of their students. Do students work harder for professors they like? Do they learn more in their favorite professors' classes? What is the significance of student and teacher relationships? What do Chinese university students value in their professors? A study done by Tam, Heng and Jiang (2009) suggested that students in contemporary China are seeking not only a transformation of the mind, but also of the heart, arguing for the importance of student-teacher relationships and affective teaching in China.

This study is particularly relevant to university human resources offices in China and those who make decisions regarding faculty hiring, training and supervision, as these results provide evidence of characteristics and qualities that are prefered by and positively impact Chinese university students. University faculty, particularly those primarily engaged in teaching, may benefit greatly from the same results, which if applied can make them more effective in the classroom and increase student learning and motivation. Research in this field is well-established in the West, but is relatively sparse in Asia, thus the results of this study can be used as a springboard for future research in the area of teacher effectiveness, teacher qualification, and student impact.

Literature Review

Student Motivation

Student motivation is one of the most powerful determinants of student success in the classroom (Dorneyi, 1994; 2000; Jung, 2011; Oxford & Shearin, 1994; Williams, 1994). It greatly influences student involvement and achievement (Rugutt & Chemosit, 2009). When students are not motivated, they fail to grasp the concepts being taught. This is reflected in their grades and feedback from their instructors (Gan, Humphreys, & Hamp-Lyons, 2004). There is a wide range of motivation types and consequently varied approaches to motivating students. In this study, motivation will be categorized into two types, extrinsic and intrinsic. The study will primarily deal with intrinsic motivation and how teachers play a role in intrinsically motivating students. Teachers also provide extrinsic rewards such as grades or special treatment for high academic performance and participation.

Extrinsic Motivation

Extrinsic motivation can be defined as the energy and desire one directs towards a certain task; it is fueled by the possibility of external gains such as money, good grades, rewards, praise, and so on (Brown, 2007; Rugutt & Chemosit, 2009). Extrinsic motivation is also fueled by the

avoidance of punishment (Brown, 2007). Many students are motivated extrinsically through grades, praise from their instructors, and the prospect of securing a good job in the future (Pratt, Agnello, & Santos, 2009; Rugutt & Chemositt, 2009). Extrinsic motivation helps to push students toward a goal when there is a loss of intrinsic motivation. A study by Pratt et al. (2009) found that the strongest motivator among Spanish language students to continue taking Spanish classes was grades. In addition, students who received high marks persisted in studying the language because they thought it would be relevant for their future and they felt competent in the task of learning Spanish (Pratt et al., 2009). Another extrinsic motivator, which may also be categorized as intrinsic, is personal relationships. Students are motivated by the relationships they have with other students and faculty (Pratt et al., 2009; Rugutt & Chemosit, 2009). It is however unclear as to whether relationships qualify as an extrinsic or intrisic motivator. Do students achieve for the sake of developing positive relationships, or do existing positive relationships intrinsically motivate them to achieve? Furthermore, do positive relationships correlate with academic success and learning?

Intrinsic Motivation

Intrinsic motivation represents the energy and desire directed toward a particular task; it is fueled by an innate sense of satisfaction (Brown, 2007; Rugutt & Chemosit, 2009). Intrinsic motivation is often stronger than extrinsic motivation, as it does not require an external reward or punishment, rather, it involves innate desires which are typically more stable and enduring. Students who desire to learn often have a high aptitude for a certain subject, prior knowledge, strong attention skills, and strong critical thinking skills; based on such intrinsic motivators, they also have a statistically greater chance of academic success (Rugutt & Chemositt, 2009; Socha & Sigler, 2012). This makes academic choice an important factor in motivating students.

Teachers and Students

The interaction between teachers and students has a noticeable effect on students' motivations, attitudes, and success (Micari & Pazos, 2012). In more difficult university courses, students may have less peer support and must rely on the relationships they have with their professor (Micari & Pazos, 2012). However, the impact of student—teacher interaction stretches beyond difficult courses. Greater and more positive student—teacher interaction results in more engaged students and a higher academic self-concept (Komarraju, Musulkin, & Bhattacharya, 2010; Micari & Pazos, 2012; Umbach & Wawrzynski, 2005). When considering this interaction, it is important to take into account the relationships that teachers develop with their students and the effects these relationships have.

Teachers' Relationships with Students

Human interaction has consequences that influence the behaviors and outcomes of ourselves and others. In academia, it is no different. In the context of an organic chemistry course, a study by Micari and Pazos (2012) revealed that students who felt they had a positive relationship with their professor scored higher in the course than those who felt they did not have a positive relationship. In that study, the researchers defined a positive relationship as "looking up to the professor, feeling comfortable approaching the professor, and feeling that the professor respects the students." In other words, according to Micari and Pazos (2012), positive relationships are correlated to positive academic results.

Estepp and Roberts (2013) found a positive relationship between rapport and student expectancy for success. Students who have good relationships with their professors tend to

think they will succeed in class. However, the quality of the teacher-student relationship depends both on the teacher as well as the student.

Teachers' Influence on Student Motivation

Studies have shown that an emphasis on student–faculty interaction, encouraging students, providing positive feedback to students, developing personal connections with students, and cultivating a positive environment in the classroom all strongly affect student motivation (Rugutt & Chemosit, 2009; Hardre, 2012; Hardre, Sullivan, & Crowson, 2009; Tam, Heng, & Jiang, 2009). Positive teacher interactions with students are a statistically significant predictor of student motivation, thereby influencing positive academic change (Rugutt & Chemosit, 2009). Motivational teachers are able to identify learning barriers and create effective strategies to help their students overcome them, most often giving relevance to the subject matter, creating student interest and developing a genuine and personal connection with students (Hardre, 2012; Hardre & Sullivan, 2009). One study showed that uninteresting classes and lack of will to study discouraged students from learning (Jung, 2011). Another found that overarching themes of caring and high expectations motivated at-risk adolescent students to graduate from high school (Rowan, 2013). Students respond to teachers who are genuinely interested in them as individuals, not just an audience to relay information to.

Teacher Qualities

The personal and professional qualities and characteristics of teachers influence the motivation and output of students at all school levels (Gennerman, 2009; Liu & Meng, 2000; Miller, 1987; Reynolds & Tedlie, 2000). Teachers who have positive social, professional, and organizational qualities tend to have students that are more likely to be motivated and produce quality learning outcomes (Buchanan, 2007; Liu & Meng, 2009; Miller, 1987; Reynolds & Tedlie, 2000; Tam et al., 2009). When teachers are unorganized, unprofessional, apathetic, and boring, student learning outcomes and motivation are negatively affected (Foote, Vermette, Wisniewski, Agnello, & Pagano, 2000; Strickland, 1998). It is important to consider the personal and professional qualities of a teacher in light of the motivation and learning outcomes of students.

Characteristics of Exemplary Teachers

Great teaching is instruction communicated to students that is effectively processed by students and applied to their studies and life. According to students in a study by Miller (1987), exemplary teachers have contagious enthusiasm, time for student questions and comments, control of the classroom pace, and competency in their chosen field. They are humorous, encouraging, patient, caring, creative, and challenging. Effective teaching processes include time management, classroom organization (preparing lessons in advance), explaining the purpose and structure of the lesson, using effective teaching practices, and adapting practices to different sets of learners (Liu & Meng, 2009; Reynolds & Tedlie, 2000). Exemplary teachers put forth a persistent effort to see students achieve and want to grow in their own profession as well (Gennerman, 2009).

Exmplary teachers possess a set of both internal and external characteristics. These internal characteristics include a strong view of self, a positive view of others and the work of teaching, use of humor in the classroom, desire to learn continuously, and commitment to giving students what they need (Gennerman, 2009). In conjunction, exemplary teachers possess the following external characteristics: working in a risk-taking environment, using research-based practices, having a strong connection with students, and working together with colleagues and

administration. Numerous studies support these findings, reporting that exemplary teachers have a strong connection with their students, are humorous in class, and tend to be positive (Buchanan, 2007; Liu & Meng, 2009; Miller, 1987; Reynolds & Tedlie, 2000; Tam et al., 2009).

In contrast, weak teachers do not have adequate knowledge of the subject they are teaching, have poor classroom control, act unprofessionally, focus on inappropriate teaching goals or have no goals at all, and emphasize methods rather than students (Foote et al., 2000; Strickland, 1998). Poor teachers make students dislike the subject matter by making it seem boring or irrelevant (Foote et al., 2000). One obvious characteristic that weak teachers share is inconsistency (Foote et al., 2000; Strickland, 1998). They may be too strict at times and too lenient at other times, often emotionally temperamental and lacking self-control when displaying their displeasure with students. Weak teachers do not work well with their colleagues and administration and are found to be lazy (Foote et al., 2000). Many of the characteristics of examplary teachers are the opposite of those of weak teachers.

Chinese Student Perceptions of Teachers

Student performance is influenced by their perceptions of and interactions with their teachers (Buchanan, 2007; Hardre, 2012; Hardre & Sullivan, 2009; Rugutt & Chemosit, 2009; Tam et al., 2009). In China, these effects are comparable with undergraduate students reporting that they desire teachers who are enthusiastic about their class, have a sense of humor, are competent, show a certain degree of expertise, are caring, are entertaining, use different teaching methods, are able to communicate effectively, are fair and approachable, are able to make students feel smart, are organized, use relevant material, lead lively discussions, and encourage students to be creative (Levy & Peters, 2002; Mu, 2002; Tam et al., 2009). Mu (2002) classified qualities of a good teacher into three categories, namely personality, competence, and delivery. Medical students in Mu's (2002) study reported that their favorite teachers were those who possessed these qualities. Although some of these attributes are congruent with the traditional view of a Chinese teacher, many have been influenced by reform and globalization. Chinese undergraduate students in the 21st century have the world at their fingertips. Because of the internet, different social and political ideologies are a finger click away. They exercise a greater amount of freedom than their parents and have not experienced major social or political commotion in their lifetime (Tam et al., 2009). These factors, among others, influence what Chinese undergraduate students want from their professors. Students want teachers who are competent and knowledgeable, genuinely interested in the subject, and challenge their thinking. They want a close relationship with their teacher (Buchanan, 2007).

In contrast, students do not want teachers and professors who are arrogant, selfish, and teach directly from the book (Buchanan, 2007; Hardre, 2012; Hardre & Sullivan, 2009, National Public Radio [NPR], 1977). They want to be interested in the subject they are studying, and they want their teachers to make the subject interesting.

Methodology

Approach

Empirical survey research, soliciting both quantitative and qualitative data, was utilized for this study. Data was collected from January to March, 2014 in Shanghai.

Sampling

This study used convenience sampling and purposive sampling, similar to the sampling employed by Tam et al. (2009). Surveys were sent out to three different universities in Shanghai, and Chinese students ages 18–36 were recruited as participants. The sampling was focused on students who had completed at least one year of university, as their responses would more likely reflect their experience with higher education rather than secondary schooling. The participants were limited to English majors or those with a sufficient command of the English language as the survey was written in English. Students in English elective courses on the campuses of Chinese universities were surveyed. In addition, participants were solicited in high traffic areas of the campus. The total number of surveys distributed was 279. Only 226 surveys were completed thoroughly enough to be suitable for analysis.

Instrument

Participants were asked to provide demographic information such as their age, gender, major, average grade point average (GPA), home province, and year of school. They were then asked to identify the ethnicity of their favorite teacher and their least favorite teacher, the subjects they taught, and three qualities to describe each of the two teachers. A five-point Likert scale was then employed to determine whether students completely disagreed or completely agreed with a set of 10 statements about their favorite professor and their least favorite professor. The first five statements were about professor characteristics: expertise, caring, entertaining, high expectations, and good lecturing ability. The next five statements focused on student feelings in the class: feeling smarter, learning more, feeling respected, receiving helpful feedback, and trying harder. The final question was open ended and asked students to finish the statement taken from the survey by Tam et al. in their 2009 study: "I wish my university professor would..." The surveys were anonymous and the information provided was given voluntarily. Similar to Tam et al. (2009), the qualitative data collected were analyzed, coded, and categorized according to similar words, phrases, and sentences. Descriptives and regressions were applied to the quantitative data.

Demographics

Age of Participants

The youngest student surveyed was 18 years old and the oldest was 36 years old at the time of the survey. The range of ages spanned 18 years. The mean age of students surveyed was 21.5 years (SD=2.8). The median age of students surveyed was 20.5 years. The mode age of students surveyed was 20 years.

Gender of Participants

Of the students surveyed, 55% (119) were male and 45% (97) were female. Ten respondents did not answer the gender question on the survey. In 2009, the ratio between males to females in Shanghai was 103–107 males to every 100 females (Caguioa, 2010), and between 50.3% and 51.9% of college admissions in China were female in 2013 (Xinhuanet.com, 2013). The data collected slightly exceeded the normal population distribution as reported by Caguioa (2010). It was also off by approximately 5% in relation to the male to female ratio among students in Chinese universities.

Household Income of Participants

The average Chinese national monthly income is 2,600 RMB; however, Shanghai has a higher average monthly income, at 3,200 RMB (NY Times, 2013). The vast majority of student households earned above the national average of 2,600 RMB per month. In fact, they earned more than double the national average. Only 16% (30) of participants' families earned similar to or less than the national average. Exactly 84% (152) of participant' families earned more than the national monthly average, while 51% of participants' families earned more than double the national monthly average. The average monthly income in China varies greatly depending on location (rural or urban, coastal or inland) and educational background (Gaokao, college graduates). It is expected that their status as elite university students contributes to the higher than average family income ranges.

Participants' Majors

Student majors were broken down into seven categories, which included medical, humanities/communications, engineering/technology, language, life/physical sciences, math, or economics/business majors. The medical major category included nursing, pre-med, surgery and gynecology students. Humanities included law, art history, and philosophy. Language majors (of which there were only 10; 5% of the sample) were studying Chinese language, English, and teaching Chinese to speakers of other languages. Life and physical science majors included biology, physics, chemistry, and anatomy. Math and economics/business majors were self-inclusive. Of the 226 students surveyed, 28 (12%) left the question of college major blank, which left the participant pool at *N*=198. Most of the students were majoring in the fields of technology/engineering (33%) and medicine (29%). As stated above, only 5% of participants studied a language. However, the lowest percentages were found in economics/business and math, only 8% of the sample.

Data Analysis

The following data reveals what undergraduate college students in Shanghai think of their favorite and least favorite teachers visualized through frequency tables and descriptive statistics. The goal during analysis was to determine the qualities of students' favorite teachers and least favorite teachers and identify attributes that favorite teachers have in common with one another and that least favorite teachers have in common with one another. Frequency tables show how common answers were distributed among survey participants.

Favorite Professors

The first five items related to characteristics of favorite professors and the next five related to how favorite professors made students feel. The first five items were as follows:

- "My favorite professor is an expert in his/her field,"
- "My favorite professor cares about students,"
- "My favorite professor is entertaining,"
- "My favorite professor has high expectations of his/her students,"
- "My favorite professor is a strong lecturer."

Students indicated greatest agreement concerning three characteristics of favorite teachers, namely expertise (85%), being entertaining (84%), and caring (83%).

The next five statements concerning favorite professors were directed at how the professors made the student feel and act. These statements were as follows:

Students indicated greatest agreement with three effects on students, as follows: feeling respected (82%), learning more (79%), and receiving helpful feedback (78%).

Linear Correlations for Respondents' Favorite Professor

As seen in Table 1, the mean scores for favorite professor characteristics ranked expertise in the field as the highest ranked (mean = 4.34, s.d.=0.99). Entertaining (mean = 4.28, s.d. = 1.04) and cares about students (mean = 4.23, s.d. = 0.98) rank second and third. Ranking by mean score ran parallel to the results of frequencies measuring agreement with the same characteristics of favorite professors.

In addition, we measured means and standard deviations of questions evaluating students' perceptions of the effect that favorite professors had on them. As seen in Table 1, amongst the five questions, students rated "feeling respected" highest (mean = 4.21, s.d. = 1.03), followed by "learning more" (mean = 4.19, s.d. = 1.01) and "receiving helpful feedback" (mean = 4.12, s.d. = 0.99). Similarly, these rankings by mean scores were identical to the rankings when measuring agreement with the respective set of questions measuring student perceptions of favorite professors' effects on student outcomes.

Table 1. Means and standard deviations of how participants think and feel about their favorite professors

Teacher Quality	Mean	Standard Deviation
Expert in the Field	4.34	(0.99)
Cares about Students	4.23	(0.98)
Entertaining	4.28	(1.04)
Has High Expectations	4.07	(0.99)
Strong Lecturer	4.15	(1.01)
Professor's Effect on Student		
Feeling Smarter	3.89	(1.02)
Learn More	4.19	(1.01)
Feel Respected	4.21	(1.03)
Receive Helpful Feedback	4.12	(0.99)
Try Harder	4.04	(1.03)

Participant responses were measured on a Likert scale where 1=completely disagree and 5=completely agree.

Analyzing for relationships between the questions measuring favorite professor qualities and those measuring effect of favorite professors, a linear correlation was conducted with the following results (see Table 2).

[&]quot;As a student, I feel smarter in my favorite professor's class,"

[&]quot;I learn more in my favorite professor's class,"

[&]quot;I feel respected by my favorite professor,"

[&]quot;I receive helpful feedback from my favorite professor,"

[&]quot;I try harder for my favorite professor."

Table 2. Correlations between five teacher qualities and five effects on participants for favorite professors

Measures	1	2	<u>3</u>	<u>4</u>	<u>5</u>	<u>6</u>	<u>7</u>	8	9	10
1. Expertise	-									
2. Caring	0.68	-								
3. Entertaining	0.62	0.68	-							
4. Expectations	0.57	0.58	0.46	-						
5. Good Lecturer	0.64	0.61	0.61	0.59	-					
6. Feel Smarter	0.57	0.58	0.55	0.44	0.58	-				
7. Learn More	0.59	0.57	0.50	0.39	0.56	0.63	-			
8. Feel Respected	0.63	0.68	0.61	0.51	0.52	0.51	0.64	-		
9. Good Feedback	0.58	0.61	0.51	0.45	0.59	0.52	0.64	0.69	-	
10. Try Harder	0.55	0.56	0.45	0.44	0.56	0.51	0.62	0.59	0.66	-

Participant responses were measured on a Likert scale where 1 = completely disagree and 5 = completely agree.

All p-values < 0.05.

As seen in Table 2, all questions measuring favorite teachers' qualities revealed a moderate correlation with questions measuring student perceptions of favorite teachers' affect on student outcomes (with correlation coefficients ranging from r = 0.39 to r = 0.68, p < 0.05). The strongest correlations were seen between feeling respected and caring (r = 0.68, p < 0.05), feeling respected and expertise (r = 0.63, p < 0.05), feeling respected and entertaining (r = 0.61, p < 0.05) and good feedback and caring (r = 0.61, p < 0.05). Caring had the highest average correlation with student outcomes ($r_{ave} = 0.60$, p < .05). High expectations had the weakest average correlation with student outcomes ($r_{ave} = 0.45$, p < .05).

Favorite Professor Qualities

Student participants were asked to name three qualities of their favorite professor. Through open and selective coding, nine types of qualities that students attributed to their favorite professor were identified. These were as follows: appearance, ease, enthusiasm, experience, entertaining, intelligence, professional skills, personal relationship, and negative qualities.

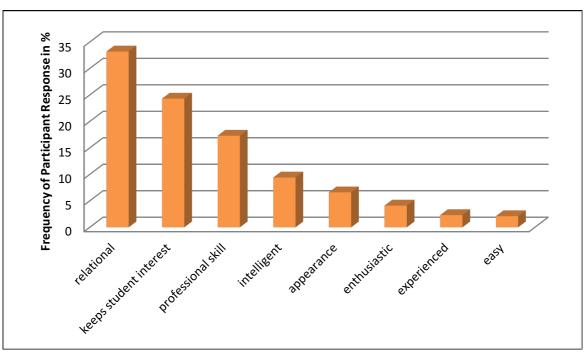


Figure 1. Percentage of all responses to the prompt "Name three qualities of your favorite professor" (N = 207).

When we aggregated all three responses from each student (see Figure 1), relational connection (32%) and keeping students interested (24%) were the top ranked characteristics offered by students.

Least Favorite Professors

The first five items in this section of the survey related to characteristics of least favorite professors and the next five related to how least favorite professors made students feel. The first five items were as follows:

- "My least favorite professor is an expert in his/her field,"
- "My least favorite professor cares about students,"
- "My least favorite professor is entertaining,"
- "My least favorite professor has high expectations of his/her students,"
- "My least favorite professor is a strong lecturer."

For the majority of students, their least favorite professors lacked all of the qualities that their most favorite professors possessed. Out of the five characteristics, expertise was ranked the most prevalent characteristic (45%) for least favorite professors. However, only 19% of students agreed that their least favorite professor was entertaining. Likewise, less than one third of participants agreed that their least favorite professor was caring (28%), had high expectations (29%) or was a good lecturer (30%).

The next five statements concerning least favorite professors were directed at how the professor made the student feel and act. These statements were as follows:

- "As a student I feel smarter in my least favorite professor's class,"
- "I learn more in my least favorite professor's class,"
- "I feel respected by my least favorite professor,"
- "I receive helpful feedback from my least favorite professor,"
- "I try harder for my least favorite professor."

There was no effect that reached the threshold of 25% of the sample. The greatest agreement was found for the responses "feel respected" (24%) and "try harder" (23%). Relatively few participants in the sample indicated agreement that their least favorite professor helped them to learn more (15%), feel smarter (16%) or receive helpful feedback (18%).

Linear Correlations for the Least Favorite Professor

As seen in Table 3, the mean scores for least favorite professor characteristics ranked expertise in the field as the highest ranked (mean = 3.33, s.d.= 1.71). High expectations (mean = 2.90, s.d. = 1.20) and cares about students (mean = 2.80, s.d. = 1.13) rank second and third. Though the highest ranked category remained the same, the mean scores largely differed from the frequency analysis of agreement with the same characteristics of least favorite professors.

In addition, we measured means and standard deviations of questions evaluating students' perceptions of the effect that least favorite professors had on them. As seen in Table 3, amongst the five questions, students rated "feeling respected" highest (mean = 2.73, s.d. = 1.15), followed by "try harder" (mean = 2.68, s.d. = 1.20) and "feel smarter" (mean = 2.55, s.d. = 1.15). These rankings by mean scores were similar to the rankings when measuring agreement with the respective set of questions measuring student perceptions of least favorite professors' effects on student outcomes.

Table 3. Means and Standard Deviations of How Participants Think and Feel about Their Least Favorite Professors

Favorite Professors		
Teacher Quality	Mean	Standard Deviation
Expert in Field	3.33	(1.71)
Cares about Students	2.80	(1.13)
Entertaining	2.34	(1.25)
Has High Expectations	2.90	(1.20)
Strong Lecturer	2.78	(1.23)
Professor's Effect on		
Students		
Feel Smarter	2.55	(1.15)
Learn More	2.53	(1.17)
Feel Respected	2.73	(1.15)
Receive Good Feedback	2.54	(1.16)
Try Harder	2.68	(1.20)

Participant responses were measured on a Likert scale where 1=completely disagree and 5=completely agree.

Analyzing for relationships between the questions measuring least favorite professor qualities and those measuring effect of least favorite professors, a linear correlation was conducted with the following results (see Table 4).

Table 4. Correlations between Five Teacher Qualities and Five Effects on Participants Related to Least Favorite Professors

Measures	1	2	3	4	5	6	7	8	9	10
1. Expertise	-									
2. Caring	0.53	-								
3. Entertaining	0.28	0.53	-							
4. Expectations	0.40	0.45	0.43	-						
5. Good Lecturer	0.50	0.52	0.46	0.52	-					
6. Feel Smarter	0.23	0.45	0.49	0.35	0.41	-				_
7. Learn More	0.27	0.56	0.58	0.42	0.55	0.73	-			
8. Feel Respected	0.35	0.58	0.49	0.38	0.45	0.59	0.53	-		
Good Feedback	0.33	0.53	0.59	0.47	0.50	0.66	0.72	0.64	-	
10. Try Harder	0.35	0.47	0.51	0.44	0.51	0.55	0.64	0.53	0.62	-

Note. Participant responses were measured on a Likert scale with 1=completely disagree and 5=completely agree.

All p-values = < 0.05.

As seen in Table 4, questions measuring favorite teachers' qualities revealed a range of correlation coefficients with questions measuring student perceptions of least favorite teachers' affect on student outcomes (with correlation coefficients ranging from r = 0.23 to r = 0.59, p < 0.05). The strongest correlations were seen between entertaining and good feedback (r = 0.59, p < 0.05), entertaining and learn more (r = 0.58, p < 0.05), and caring and feel respected (r = 0.58, p < 0.05). Caring had the highest average correlation with student outcomes ($r_{ave} = 0.60$, p < 0.05). High expectations had the weakest average correlation with student outcomes ($r_{ave} = 0.45$, p < 0.05).

Qualities of the Least Favorite Professor

Student participants were also asked to name three qualities of their least favorite professor. Through open and selective coding, nine types of quality that students attributed to their least favorite professor were found: poor appearance, difficult, irresponsibility, unfriendliness, dullness, arrogance, lack of qualifications, communication issues, and positive qualities.

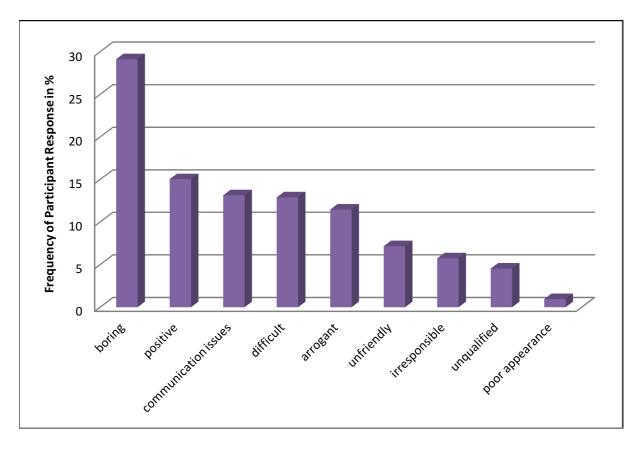


Figure 2. Percentage of all responses to the prompt, "Name three qualities of your favorite professor" (N=164).

When we aggregate all three responses from each student (see Figure 2), boring (29%) is the most common characteristic attributed to least favorite professors by our sample. Communications issues (13%), difficulty (13%), and arrogance (11%) were also common responses offered by students.

Comparing Favorite and Least Favorite Professors

On average, students agreed that their favorite professors possessed the five positive characteristics; at the same time, relatively few agreed that their least favorite professors possessed those same characteristics. Likewise, most students agreed that their favorite professors had effects on student outcomes, but the majority did not express agreement that their least favorite professors had a similar effect.

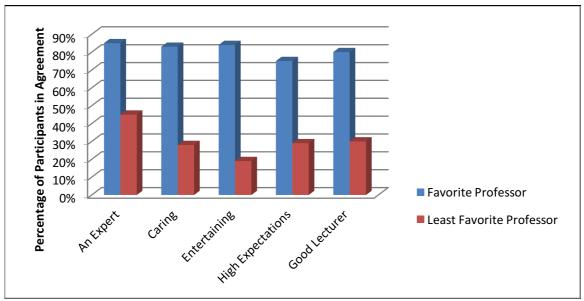


Figure 3. Percentage of participants in agreement or complete agreement with each of the five statements about the favorite and least favorite professors (N = 209).

As seen in Figure 3, there is a range, 40% to 65%, of gaps between characteristics of favorite and least favorite professors. The gap between favorite and least favorite professors is greatest in "entertaining" with a 65% difference. The characteristic with the smallest gap between favorite and least favorite professors is "expertise" with a 40% difference.

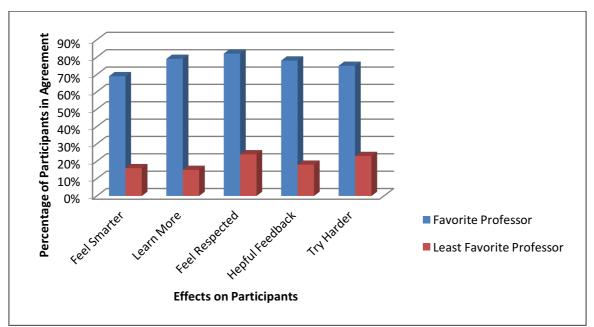


Figure 10. Percentage of participants in agreement or complete agreement with each of the five statements about favorite and least favorite professors' effects on students (N = 209).

As seen in Figure 10, there is a 43% to 53% gap between the impact of favorite and least favorite professors. The gap between favorite and least favorite professors is greatest in "feel respected" with a 53% difference. The characteristic with the smallest gap between favorite and least favorite professors is "feel smarter" with a 43% difference.

Conclusions

Summary

This study examined Chinese university students' perceptions of their professors' characteristics. Students described their favorite professors as entertaining and caring experts in their field; these results were confirmed by both means of responses as well as frequencies of agreement. Similarly, two of those same characteristics were missing from students descriptions of their least favorite professors: entertaining and caring; this was again confirmed by both means of responses as well as frequencies of agreement. Finally, when we examine responses to the open-ended question "Name three qualities of your favorite professor" we see further confirmation. The top three most frequently cited qualities of favorite professors were: relational (similar to caring), keeps student interest (similar to entertaining), and professional skill (simliar to expertise). Chinese university students, in summation, value professors who are relational and caring, entertaining and interesting, skilled and experts.

We also examined how students believe their professors affect student outcomes. The results based on an analysis of means of responses as well as frequencies of agreement, indicate that professors influence students in divergent ways. Students expressed that they feel more respected, learn more and receive helpful feedback from their favorite professors. They do not express the same sentiment towards their least favorite professors, with the greatest difference in opinion in regards to feeling respected. In fact, every characteristic differed in agreement by at least 45%.

In this study, we sought out to examine the relationship between professors' chracteristics and student outcomes. Though all professors' characteristics had moderate correlations with student outcomes, "caring" had the strongest correlations with student outcomes. "Feeling respected" had the strongest correlations with professors' characteristics.

Discussion

University students in China value many of the same characteristics that their peers all around the world do. They value professors that are entertaining, caring and experts in their fields. They expect these same professors to respect students, result in gains in student learning, and provide helpful feedback.

The data reiterates the importance of student–faculty interaction, relationships and rapport. Students also desire what previous studies have shown to be the characteristics of great teachers. As mentioned above, Miller's (1987) study demonstrated that great teachers have contagious enthusiasm and time for student questions and comments. They are encouraging, patient, and caring (Miller, 1987). Students identified similar characteristics as desirable in their professors. Enthusiasm, encouragement and care were all repeatedly listed by the participants as qualities of favorite professors.

Encouraging students, providing positive feedback, developing personal connections with students, and cultivating a positive environment in the classroom all positivitely and significantly affect student motivation (Hardre 2012; Hardre et al., 2009; Rugutt & Chemosit, 2009; Tam et al., 2009). The majority of students in our study desire professors who care about them, show an interest in them, and give feedback that can profitably influence their learning. When professors make their classes interesting and entertaining, it beneficially affects students' intrinsic motivation.

In addition to caring professors, those that were good lecturers and experts in their fields were highly correlated with increased student learning and student effort. These results confirm the findings of Foote et al. (2000) that demonstrate that students are motivated to learn when they have teachers who understand their subject matter and can make learning relevant. More often than not, educational rhetoric poses subject matter knowledge and pedagogy as the opposite poles of a stark dichotomy. Rather, our results illustrate the two working in tandem along with positive rapport with students.

Our conclusions are supported by additional qualitative data included at the end of the survey, where participants were told to finish the sentence, "I wish my university professor would..." Out of the 226 participants, 57% (N = 129) responded. Of those who gave a response, 30% (N = 68) of participants mentioned "fun," "funny," "humor," "interesting," or "entertaining." For example, a 27-year-old male biology student stated, "I wish my university professor would be funny, knowledgeable and focus on the details of our class." A 24-year-old male medical student, made the following statement, "I wish my university professor would be an expert in his or her field and organize the class very well... He should also be interesting." Again, Chinese university students wanted professors who were interesting, entertaining and experts in their field. Several also desired interaction with their professors in and out of the classroom.

Despite these findings, many participants provided examples of extrinsic motivation in regards to their perceptions and expectations of their professors, confirming the findings of Pratt et al. (2009) and Rugutt and Chemosit (2009), who reported that many students are motivated extrinsically, for example through grades and test scores.

Limitations

Among the possible confounding variables and limitations, we highlight the following three: cultural and linguistic bias, leading questions, and subjectivity of qualitative coding. The surveys were distributed to Chinese university students in college-level English courses with the assumption of their English ability based on their enrolment in the courses. It must be noted, however, that it would be reasonable to expect some variability in English fluency and ability. If the survey had been translated into Chinese, some of these concerns would be mitigated. The likert scale questions, though based on the findings in the literature review, could lead to results that were self-fulfilling. As seen in the results for the likert scale questions, frequencies of agreement were uniformly high as were the correlation coefficients. In our study, we followed up with several open-ended questions which verified the results of our likert scale questions. Expanding the list of characteristics to 10 or more would have potentially provided greater variability in the results. The open-ended questions, although potentially more authentic and valid, were subjectively coded and categorized. Again, the qualitative coding process was systematic and informed by the literature review, but we admit the subjectivity of this approach. Additional coders, checking for coding consistency, may have increased the reliability of the data.

Implications

The extensions of this study are numerous and varied. Studies in other national and cultural contexts could be applied and those results could be compared to ours. Additional characteristics could be added so that a larger range of teacher qualities could be evaluated and correlated with student outcomes

Admissions and recruiting offices would be advised to expand their application requirements so that candidates would provide evidence not only of pedagogical and subject matter expertise,

but in addition, demonstrate their capacity to develop rapport with students and their ability to make learning interesting and engaging, screening out those who lack those key qualifications. Pre- and in-service training may benefit from adding curriculum that develops compassion, care and interpersonal skills in addition to strategies for infusing fun, excitement and engagement into their pedagogy.

We believe that the question of what makes an exemplary teacher is one that must be continually and repeatedly asked. There are notions of teaching that persist through generations and across contexts, but at the same time, these characteristics are not static but vary in their appearance and outcomes. According to our data, exemplary teachers are those that care about students, make learning interesting, and possess expertise in their field. Just a few decades ago, expertise may have had greater prominance compared to caring and entertaining as characteristics of exemplary teachers. Most of us had a favorite teacher that stands out because of some set of traits or behaviors that impressed us, changed us, gave us a reason to learn. If nothing more, our data confirms the value of teachers and their impact on our lives.

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